

is also Chitty's type locality where he obtained a few good specimens.

Pleurodonte schroeteriana (Pfr.) (Area 12). This species abounds in the wood of the western part of Westmoreland, it occurs much less commonly in the other parts of this area.

Pleurodonte tridentina (Fer.) and *P. browneana* (Area 12) are found in the woods on the northern parts of this area, at a higher elevation than *P. schroeteriana*. These two species are allied to *P. schroeteriana*, and if not good species, the types are very highly differentiated varieties. These shells are also subject to considerable individual variation.

Pleurodonte sinuata (Müll.) is the only species of this group which is found almost all over the island. Slightly specialized local forms do occur, but it is remarkable that a shell so widely distributed and so abundant should be so constant.

Pleurodonte soror (Fer.) (Area 9). This shell occurs in the Parish of Hanover and the bordering mountains of Westmoreland.

Pleurodonte peracutissima (Ads.). This shell is generally distributed over the higher regions of Manchester, Clarendon, St. Ann, Trelawny and St. Elizabeth. In spite of this species being so widely distributed and varying very much in size, and other minor characters, there is little doubt as to the extreme varieties belonging to the same species. Several localities have their typical varieties of this species.

Pleurodonte cara (Ads.) inhabits the western part of the Island (the part shaded on the map), and a few stragglers have been found in the mountains on the north of Manchester and St. Elizabeth. There are two very distinct varieties of this shell, the type with the "very thick, strong lip" from St. James and Hanover, and the common and more widely distributed variety which is of a much lighter build and with thinner lip.

NOTICES OF NEW LAND SHELLS OF THE JAPANESE EMPIRE.

BY H. A. PILSBRY.

Eulota despecta var. *kikaiensis* n. var.

Smaller and more solid than *despecta*, pink-tinted, at least near the aperture; the cuticle thin or wanting, hardly yellowish. Inner

border of the lip more or less thickened, pink or lilac colored, the throat paler. Whorls 5 to $5\frac{1}{3}$.

Alt. 17, diam. 19 mm.

Alt. 15 to $15\frac{1}{2}$, diam. 17 mm.

Kikaiga-shima, Oshima group, Osumi.

The fossil specimens from Kikaiga-shima belong to the larger typical form, which also still exists in the living fauna of the island, practically indistinguishable from the Okinawa shells, and showing the same color variations, from brownish-pink to a whitish straw tint.

Punctum morseanum n. sp.

Shell umbilicate, depressed, convex, low conic above, convex beneath, thin, brownish-corneous. Surface slightly shining, nearly smooth, but there are a few irregular and low thread-like striæ of growth. Whorls $3\frac{1}{2}$, convex, separated by a well-impressed suture, the last whorl rounded at the periphery, convex beneath. Aperture oblique, rounded, somewhat less than one-fourth of the circle excised at the parietal wall. Peristome simple and thin, the columellar margin dilated. Width of the umbilicus one-sixth the diameter of the shell. Alt. 0.73, diam. 1.9 mm.

Hirado, Hizen, in western Kyūshū. Types no. 83024 A. N. S. P., from no. 553*b* of Mr. Hirase's collection.

This species is much larger than *P. japonicum* Pils. It differs from *P. amblygona* (Reinh.) and its variety *pretiosum* (Gude) in the rounded periphery and smoother surface. *P. leptum* (Westerl.), described from Nagasaki, which is not known to me by specimens, is apparently different in its sculpture of delicate, crowded, cuticular lamellæ, and in the obtuse angulation of the last whorl.

Prof. E. S. Morse informs me that he has demonstrated the existence of the genus *Punctum* in Japan by examination of the jaw. The species he worked on has not been determined, but it may not unlikely prove to be *amblygona* Reinh., as that occurs in the region of Tokyo. The described Japanese species mentioned above I have referred to *Punctum* from their shell-characters only. All of them are extremely small.

Hirasea acuta n. sp. Shell solid, biconvex, acutely carinate at the periphery, densely and finely striate above, and decussated with fine spirals below; brown, paler or whitish around the perforation; whorls slightly over 4, flat, the last deflexed in front, contracted at

the mouth. Aperture small, acutely angular at the position of the keel; basal lip strengthened within by a strong, white, callous rib. Alt. $1\frac{1}{2}$, diam. $3\frac{1}{2}$ mm.

Imotoshima, Ogasawara (Mr. Y. Hirase).

Not quite so depressed as the slightly larger *H. acutissima*, and beautifully decussated beneath.

Mandarina mandarina var. *conus* n. var. Shell much elevated, the spire pyramidal, with obtuse apex. Nearly black brown, 2 or 3 early whorls reddish; sometimes with a pale patch at the middle of the base. Alt. 21, diam. 22 mm.

Imotoshima, Ogasawara (Mr. Hirase, no. 896).

Clausilia japonica var. *okinoshimana*, n. var. Larger than *japonica*, coarsely fold-striate, with fine spiral striae visible in most of the interstices; whorls $11\frac{1}{2}$. Dark purplish-brown, with a yellowish border under the sutures on the middle whorls. Aperture, lamellae and plicae as in *C. japonica*. Length 31-34, diam. 7-8 mm.

Okinoshima, Tosa. Types no. 80846 coll. A. N. S. P., from no. 585 of Mr. Hirase's collection.

Distinguished by its large size, dark color and strongly developed sculpture. It is not, however, different from *japonica* in any important structural feature.

Microcystina yakuensis n. sp.

Shell imperforate, depressed, biconvex, thin, somewhat translucent, pale yellow, glossy and smooth. Spire low conoidal, composed of $4\frac{1}{2}$ convex, slowly increasing whorls separated by a well impressed suture. Last whorl rounded peripherally, convex beneath, impressed at the axis. Aperture lunate; peristome thin and fragile; columellar margin reflexed, somewhat thickened. Alt. 1.2, diam. 2.3 mm.

Yaku-shima. Types no. 83035, A. N. S. P., from no. 900 of Mr. Hirase's collection.

This species is a miniature of "*Macrochlamys*" *tanegashimæ*, of Tanega-shima and Satsuma.

Kaliella Okiana n. sp.

Shell subperforate, conic-depressed, thin, brownish, somewhat glossy, the upper surface slightly striatulate, base whorl glossy. Spirally striate. Spire conic, composed of 5 convex whorls, the last slightly angular in front, becoming rounded. Aperture lunate,

the lip single and thin, columellar margin suddenly dilated and reflexed at the axial insertion, a little thickened. Alt. 2.1, diam. 2.7 mm.

Hirado, Hizen. Types no. 82969 A. N. S. P., from no. 891 of Mr. Hirase's collection. Named for Mr. Oki, Mr. Hirase's correspondent in Hirado.

Kaliella hizenensis n. sp.

Shell minute, imperforate, depressed-conic, thin, yellowish, somewhat transparent. Surface sculptured with excessively minute, densely crowded radial striae above, nearly smooth beneath. Spire low-conic, composed of slightly more than 4 very convex, slowly increasing whorls, the last rounded at the periphery, convex beneath, impressed at the axis. Aperture oblique, rounded-lunate, the peristome thin and simple, dilated and reflexed at the columellar insertion. Alt. 1.4, diam. 1.9 mm.

Hirado, Hizen. Types no. 82970. A. N. S. P., from no. 892 of Mr. Hirase's collection.

This very small species, of which 10 specimens were sent, is somewhat like *K. pagoduloides*, but more depressed and not so large.

DESCRIPTION OF A NEW UNIO FROM TENNESSEE.

BY WM. A. MARSH, ALEDO, MERCER CO., ILLINOIS.

Quadrula Beauchampii n. sp. Pl. I, lower two figs.

Shell subtriangular, inflated over the umbones and beaks; shell very thick and solid, thicker before, beaks solid, raised and *incurved*, inequilateral, rounded before, obtusely angular behind, ligament short, thick, light brown, epidermis yellowish-brown, growth lines close and very prominent, almost sulcate. Shell compressed at the base, slightly flattened on the sides, umbonial slope rounded, posterior slope rather wide, with a dark impressed line from beaks to basal margin. Beak sculpture unknown. Cardinal teeth heavy and solid, rather compressed, corrugate and sulcate, lateral teeth short, thick and slightly curved. Anterior cicatrices small and deep, posterior cicatrices distinct and well impressed, shell cavity wide, cavity of beaks deep and obtusely angular, nacre white. Dimensions of an adult specimen: diam. 1.4, length 2.2, breadth 2.3 inches.